

LISTING OF THE CLAIMS

This listing of claims is the current listing of claims currently pending in the application:

Listing of Claims:

1. (Currently Amended) A method for synchronizing a wakeup schedule for a first communications module and a wakeup schedule for a second communications module in a wireless mobile unit, the method comprising:

computing a next wakeup time for the first communication module~~[[,]] the computing is based at least in part on a time period set by the wireless mobile unit;~~
computing a next wakeup time for the second communication module; and
~~synchronizing~~ modifying the next wakeup time for the second communication module to a new wakeup time for the second communication module that is substantially synchronized to the next wakeup time for the first communication module if the next wakeup time for the first communication module is earlier than the next wakeup time for the second communication module.

2. (Currently Amended) A method for synchronizing a wakeup schedule for an Ultra-Wideband (UWB) module and a wakeup schedule for a communications module in a wireless mobile unit, the method comprising:

calculating a next communications wakeup time ~~based at least in part on a time period set by the wireless mobile unit;~~
calculating a next UWB wakeup time; and
~~synchronizing~~ changing the next UWB wakeup time to a new UWB wakeup time that is substantially synchronized to the next communications wakeup time if the next communications wakeup time is earlier than the next UWB wakeup time.

3. (Cancelled)

4. (Original) The method of claim 2 further comprising:
determining a current communications time; and
determining a current UWB time.
5. (Previously Presented) The method of claim 4 further comprising
determining a communications interval, the communications interval equaling the next
communications wakeup time less the current communications time.
6. (Previously Presented) The method of claim 5 further comprising
synchronizing the new UWB wakeup time to the next communications wakeup time if
the current UWB time plus the communications interval is less than the next UWB time.
7. (Previously Presented) The method of claim 2 further comprising
performing a UWB wakeup process and a communications wakeup process substantially
at the new UWB wakeup time.
8. (Currently Amended) The method of claim 7 wherein the performing
comprises powering on the UWB module and the communications module substantially
simultaneously ~~so as to reduce the wireless mobile unit's power consumption.~~

9. (Currently Amended) A method for synchronizing a wakeup schedule for an Ultra-Wideband (UWB) module and a wakeup schedule for a communications module in a wireless mobile unit, the method comprising:

determining a current communications time ~~from a received pilot signal transmitted by a base station;~~
determining a current UWB time ~~from an internal clock in the UWB module;~~
determining a next UWB wakeup time;
determining a next communications wakeup time;
calculating a communications interval, the communications interval equaling $[[a]]$ ~~the~~ next communications wakeup time less the current communications time; and
~~synchronizing~~ changing the next UWB wakeup time to a new UWB wakeup time that is substantially synchronized to the next communications wakeup time if the current UWB time plus the communications interval is less than $[[a]]$ the next UWB wakeup time.

10. (Currently Amended) The method of claim 9 ~~further comprising:~~
~~establishing wherein the determining the next communications wakeup time comprises determining~~ the next communications wakeup time prior to the calculating the communications interval; and
~~establishing wherein the determining the next UWB wakeup time comprises determining~~ the next UWB wakeup time prior to the synchronizing the new UWB wakeup time.

11. (Previously Presented) The method of claim 9 further comprising performing a UWB wakeup process and a communications wakeup process substantially at the new UWB wakeup time.

12. (Previously Presented) The method of claim 11 wherein the performing comprises powering on the UWB module and the communications module substantially simultaneously.

13. (Previously Presented) The method of claim 9 wherein the wireless mobile unit comprises a UWB-enabled communications mobile phone.

14. (Currently Amended) A wireless mobile unit comprising:
a communications module configured to perform a communications wakeup process at a next communications wakeup time~~[[,]] wherein the wakeup time is computed based at least in part on a set time period, and the communications module is further configured to receive a pilot signal and to derive a current communications time from the pilot signal;~~

an Ultra-Wideband (UWB) module configured to perform a UWB wakeup process at a next UWB wakeup time, wherein the UWB module comprises a clock, the clock being configured to track a current UWB time; and

a processor configured to ~~synchronize~~ modify the next UWB wakeup time to a new UWB wakeup time that is substantially synchronized to the next communications wakeup time if the next communications wakeup time is earlier than ~~[[a]]~~ the next UWB wakeup time.

15. (Cancelled)

16. (Previously Presented) The wireless mobile unit of claim 14 wherein the UWB module is configured to perform the UWB wakeup process at the new UWB wakeup time if the next communications wakeup time is earlier than the next UWB wakeup time.

17-19. (Cancelled)

20. (Previously Presented) The wireless mobile unit of claim 14 wherein the processor is further configured to calculate a communications interval, the communications interval equaling the next communications wakeup time less the current communications time.

21. (Previously Presented) The wireless mobile unit of claim 20 wherein the processor is further configured to synchronize the new UWB wakeup time to the next communications wakeup time if the current UWB time plus the communications interval is less than the next UWB wakeup time.

22. (Previously Presented) The wireless mobile unit of claim 14 wherein the communications module performs the communications wakeup process and the UWB module performs the UWB wakeup process substantially at the new UWB wakeup time.

23. (Previously Presented) The wireless mobile unit of claim 22 wherein the communications module and the UWB module are configured to power on substantially simultaneously.

24. (Previously Presented) The wireless mobile unit of claim 14 wherein the wireless mobile unit is a UWB-enabled communications mobile phone.

25. (Currently Amended) A wireless unit comprising:
means for storing data;
means for performing a communications wakeup process at a next communications wakeup time;
means for performing an Ultra-Wideband (UWB) wakeup process at a next UWB wakeup time;
means for computing the next communications wakeup time; ~~and~~
means for computing the next UWB wakeup time; and
means for ~~synchronizing~~ modifying the next UWB wakeup time to a new Ultra-Wideband (UWB) UWB wakeup time that is substantially equal to the next communications wakeup time if the next communications wakeup time is earlier than [[a]] the next UWB wakeup time.

26. (Cancelled)

27. (Currently Amended) A digital signals processing apparatus, comprising:
a memory means for storing digital data; and
a digital signal processing means for interpreting digital signals to synchronize a wakeup schedule for an Ultra-Wideband (UWB) module and a wakeup schedule for a communications module in a wireless mobile unit by:

computing a next communications wakeup time ~~based at least in part on a set time period; and~~

computing a next UWB wakeup time; and

~~synchronizing~~ changing the next UWB wakeup time to a new UWB
wakeup time that is substantially equal to the next communications wakeup time
if the next communications wakeup time is earlier than ~~[[a]]~~ the next UWB
wakeup time.

28. (Currently Amended) The apparatus of claim 27, the digital signal processing means further interpreting digital signals to establish the next UWB wakeup time ~~after the computing, and before the~~ synchronizing changing.

29. (New) A computer-readable medium having stored thereon computer-executable instructions for:

calculating a next communications wakeup time;

calculating a next UWB wakeup time; and

changing the next UWB wakeup time to a new UWB wakeup time that is substantially synchronized to the next communications wakeup time if the next communications wakeup time is earlier than the next UWB wakeup time.

30 (New) The computer-readable medium of claim 29, the computer-executable instructions further for:

determining a current communications time; and

determining a current UWB time.

31. (New) The computer-readable medium of claim 30, the computer-executable instructions further for:

determining a communications interval, the communications interval equaling the next communications wakeup time less the current communications time.

32. (New) The computer-readable medium of claim 31, the computer-executable instructions further for:

synchronizing the new UWB wakeup time to the next communications wakeup time if the current UWB time plus the communications interval is less than the next UWB time.